20 June

Japan Patent Office is not responsible for any
damages caused by the use of this translation.

1. This document has been translated by computer.So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3.In the drawings, any words are not translated.

Bibliography.

---

(19) [Country of Issue] Japan Patent Office (JP)
(12) [Official Gazette Type] Open patent official report (A)
(11) [Publication No.] JP,2000-50219,A (P2000-50219A)
(43) [Date of Publication] February 18, Heisei 12 (2000. 2.18)
(54) [Title of the Invention] Teletext receiving set.
(51) [The 7th edition of International Patent Classification]

H04N 7/025 .
7/03 .
7/035 .
5/445 .

[FI]

H04N 7/08 A .
5/445 Z .

[Request for Examination] Un-asking.
[The number of claims] 4.
[Mode of Application] OL.
[Number of Pages] 9.
(21) [Filing Number] Japanese Patent Application No. 10-214350.
(22) [Filing Date] July 29, Heisei 10 (1998. 7.29)
(71) [Applicant]
[Identification Number] 000003078.
[Name] Toshiba Corp.
[Address] 72, Horikawa-cho, Saiwai-ku, Kawasaki-shi, Kanagawa-ken.
(72) [Inventor(s)]
[Name] Goml river Takao.
[Address] 1-9-2, Hatara-cho, Fukaya-shi, Saitama-ken Inside of Toshiba Fukaya Works.
(74) [Attorney]
[Identification Number] 100076233.
[Patent Attorney]
[Name] Ito **.
[Theme code (reference)]

5C025.
5C063.

[F term (reference)]

5C025 AA21 AA25 bus-available25 CA04 CA09 CA19 CB10 DA05.
5C063 AA01 AB07 DA03 DA13 DB02 EA01 EB03 EB42 EB46 EB47 EB50.

BEST AVAILABLE COPY

[Translation done.]

* NOTICES *

Japan Patent Office is not responsible for any
damages caused by the use of this translation.

1. This document has been translated by computer.So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3.In the drawings, any words are not translated.

Summary.

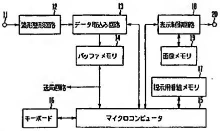
---

(57) [Abstract]

[Technical problem] In a teletext receiving set, when the teletext data memorized by buffer memory need the work initialized whenever it changes a receiving channel and a channel change is made frequently, it is indicated by reproduction and a desired character program needs the latency time.

[Means for Solution] this invention is a buffer memory means to memorize the teletext signal data which carried out an addition setup of the channel sign of a receiving channel into the undefined portion of the received data header of a teletext signal. For the aforementioned buffer memory means, account 100 million A distinction means to distinguish the channel sign which carried out an addition setup to the data header of the aforementioned teletext signal in case desired teletext program data are read in the teletext signal data carried out, in order to indicate by reproduction the teletext program data which have the channel sign of the request distinguished with the aforementioned distinction means It is the teletext receiving set characterized by providing a character program display means to generate a reproduction screen based on the teletext program data which memorized in the memory for a display and were memorized by this memory for a display.

[Translation done.]



[Translation done.]

* NOTICES *

Japan Patent Office is not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer.So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

CLAIMS

[Claim(s)]

[Claim 1] The teletext receiving set which is characterized by providing the following and which indicates the teletext program by reproduction using two or more teletext signals. A buffer memory means to add the channel sign of a receiving channel to the data header of a teletext signal, and to memorize teletext signal data. A distinction means to distinguish a channel sign in case desired teletext program data are read in the aforementioned teletext signal data made into the aforementioned buffer memory means account 100 million. A character program display means to memorize the teletext program data which have the channel sign distinguished with the aforementioned distinction means in the memory for a display, and to generate a reproduction screen based on the memorized teletext program data.

[Claim 2] The teletext receiving set according to claim 1 characterized by distinguishing based on the aforementioned addition channel sign in case a registration memory means only for specific programs to memorize specific teletext program data is established, the channel sign of a receiving channel is added and memorized to the data header of specific teletext program data and specific teletext program data are read.

[Claim 3] The teletext receiving set according to claim 1 or 2 characterized by using the broadcast identification code of the alphabetic signal which received as a channel sign added to the aforementioned teletext signal data.

[Claim 4] The teletext receiving set according to claim 1 to 3 characterized by using a broadcasting station employment data area as a data header of the aforementioned teletext signal data.

[Translation done.]

* NOTICES *

Japan Patent Office is not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[The technical field to which invention belongs] this invention relates to the teletext receiving set which can perform reference operation of teletext data quickly by simplifying initialization operation of the memory currently performed whenever it changes a channel about a teletext receiving set.

[0002]

[Description of the Prior Art] A teletext repeats two or more kinds of character programs in the form of a digital signal, and is transmitted to the specific horizontal scanning period in the vertical blanking interval of a television signal. The signal of all character programs is sampled by signal sampling operation of a teletext from the television signal transmitted in the receiving side. Once take account 100 million for buffer memory, and out of two or more of these memorized character programs, a televiewer does selection specification, and reads a desired program, and it writes in the memory for presentation. When display processing for carrying out the television conversion to signals of the character program data memorized by this memory for presentation is performed, and it displays on a television screen and addition sound data exist in the aforementioned character program data, it is the system which generates and carries out the voice output of the electronic voice from addition sound data.

[0003] The conventional teletext receiver is memorized by the aforementioned buffer memory in the state of the received alphabetic-signal data in the whole sentence character program data of the television broadcasting channel which carried out selection reception. When a change change of the receiving television channel is made for this reason, after initializing all the contents of alphabetic-signal data before channel change change memorized by the aforementioned buffer memory, it is necessary to start the account 100 million of the alphabetic-signal data of the television channel after channel change change.

[0004] On the other hand, apart from the aforementioned memory for presentation, although preparing the specific registration memory which memorizes the specific character program data only assigned [of the specification of a specific television channel] to character programs, and also making the specific character program data of the specific channel memorize is performed In case the specific character program data of this specific channel are changed, it is necessary to initialize specific registration memory and to make the specific program data of the new specification channel after change newly memorize.

[0005] That is, whenever the aforementioned buffer memory makes a change change of the television channel to receive In order to carry out elimination initialization of the teletext data of the channel before channel change change and to make the teletext data of the channel after a channel change newly memorize Even if it operates it so that the time for making buffer memory memorize the teletext data of a desired channel may be needed and the character program data of a request of this channel may be especially displayed immediately after channel change change The reproduction display of the character program data of the aforementioned request cannot be performed until all the teletext data of this channel are memorized, but the latency time arises in the reproduction display of a teletext. Moreover, in case the specific character program data of the specific channel which specific registration memory is made to memorize are changed, after carrying out elimination initialization of the existing stored data of specific registration memory, a new specific channel and character program data needed to be set up.

[0006]

[Problem(s) to be Solved by the Invention] In the conventional teletext receiving set, whenever there is no means to recognize the television channel of the teletext data memorized by buffer memory and it changed the receiving channel, it needed the work which initializes buffer memory, and it had eliminated the alphabetic-signal data carried out account 100 million before channel change. Even when it returns to the receiving channel before receiving channel change again, there is the need of redoing storage of an alphabetic data, and the latency time until the character program of the desired channel after channel change change is newly memorized by buffer memory and it is indicated by reproduction arises.

[0007] Moreover, in case it has specific registration memory, whenever it changes a specific character program, specific registration memory is initialized, and since new registration character program data serve as a storage start after carrying out the completion of initialization, it is generated in the latency time until a desired registration character program indicates by reproduction.

[0008] Therefore, sense of incongruity was given to the character program reproduction display immediately after channel change, or the technical problem which time gives misconception of failure for this reason was in the user at it.

[0009] The broadcast channel of the teletext data memorized by the buffer memory which memorizes teletext data, and specific registration memory can be recognized, the broadcast channel of the teletext data by which storage is carried out [aforementioned] at the time of program change which a desired channel is made to memorize in the time of change change or specific registration memory is distinguished, and this invention aims at providing the teletext receiving set carried out initialization of stored data as it is unnecessary.

[0010]

[Means for Solving the Problem] In the teletext receiving set with which this invention Indicates the teletext program by reproduction using two or more teletext signals The channel sign of a receiving channel is added to the data header of a teletext signal. For a buffer memory means to memorize teletext signal data, and the aforementioned buffer memory means, account 100 million A distinction means to distinguish a channel sign in case desired teletext program data are read in the aforementioned teletext signal data carried out, It is the teletext receiving set characterized by providing a character program display means to memorize the teletext program data which have the channel sign distinguished with the aforementioned distinction means in the memory for a display, and to generate a reproduction screen based on the memorized teletext program data.

[0011] In case the aforementioned teletext receiving set establishes a registration memory means only for specific programs to memorize specific teletext program data, adds and memorizes the channel sign of a receiving channel to the data header of specific teletext program data and reads specific teletext program data, it is distinguished based on the aforementioned addition channel sign.

[0012] Furthermore, the broadcast identification code of the alphabetic signal which received was used for the aforementioned teletext receiving set as a channel sign added to the aforementioned teletext signal data.

[0013] Moreover, the broadcasting station employment data area was used for both aforementioned character receiving set as a data header of the aforementioned teletext signal data.

[0014]

[Embodiments of the Invention] this invention was made by the intact data block as service discernment data among the data hierarchies of the signal composition of a teletext paying attention to the point which can add the identification code which shows a broadcast channel, a broadcast area, and a broadcasting station name.

[0015] The form of 1 operation of the teletext receiving set concerning this invention is explained using the block diagram shown in drawing 1 .

[0016] A reception channel selection is carried out by the antenna and television signal channel selection device which are not illustrated, and the video signal by which the image recovery was carried out is supplied to an input terminal 11. This video signal is superimposed on teletext data during the specific horizontal scanning of a vertical blanking interval. A video signal is sliced by predetermined slice level in a waveform shaping circuit 12, and is separated as a digital binary signal of teletext data. This digital binary signal is supplied to the data incorporation circuit 13, samples the aforementioned digital binary signal as teletext data for every data line, and supplies it to buffer memory 14. Buffer memory 14 once carries out the data for every data line from the data incorporation circuit 13 account 100 million. Data transfer from the timing control and the data incorporation circuit 13 of data line sampling in this data incorporation circuit 13 to buffer memory 14 is performed by the basis of control of a microcomputer 15. The keyboard 16 is connected to this microcomputer 15, and the keyboard 16 is equipped with the key which specifies the program number of the teletext by the ten key etc. The aforementioned microcomputer 15 samples the program number data which are in agreement with the program number specified from the keyboard 16 out of the data memorized to buffer memory 14, and makes the program memory 17 for presentation carry out the transfer storage of all the two or more pages program data that constitute the program number. The program number data memorized by this program memory 17 for presentation pass through the display-control circuit 18 per page, and are transfer write-in rare ** to the picture memory 19 for a display. The display-control circuit 18 reads the data written in the image memory 19, is changed into the RGB code of color television in three primary colors, and is drawn by the television screen which is not illustrated from an output terminal 20. In addition, if addition sound data are included by the aforementioned program number data, with the sound signal generation means which is not illustrated, this addition sound data will be made conversion and will be outputted to an audio signal. The aforementioned microcomputer 15 is also controlling the channel selection control of a television signal channel selection circuit and the control of other digital disposal circuits which are not illustrated other than control of the aforementioned data incorporation circuit 13, buffer memory 14, the memory 17 for presentation, and the display-control circuit 18 corresponding to the input from the aforementioned keyboard 16.

[0017] On the other hand, the data composition of a teletext signal is specified in the postal administration ministerial ordinance No. 77 in October, Showa 60 "the standard method of the transmission about television teletext." The data composition of the program data header in this teletext signal is shown in drawing 2 (a), and the data composition of the page data header in a teletext signal is shown in drawing 2 (b). The employment data arranged at the data area of DB6 and DB7 of this program data header and a page data header serve as a data area which can be used on the employment by the side of a broadcasting station when required, and the practical use situations of these data areas DB6 and DB7 differ for every broadcasting station, and when these data areas DB6 and DB7 are temporarily utilized by the broadcasting station side, it decodes in the state where it was ignored at a receiving side. For this reason, in a receiving side, it becomes possible to write a broadcast channel sign in these data areas DB6 and DB7.

[0018] Then, in the data composition of the program data header shown in drawing 2 , and a page data header, drawing 3 (a) As shown in data areas DB6 and DB7, it is used as an object for extension of a channel sign and a channel sign. Or as shown in drawing 3 (b), the code which shows the all prefectures of a broadcasting station to a data area DB6 is set up using a sending-out identification number (henceforth SID) as program index data, and a broadcasting station code is set as a data area DB7. This channel sign is stored in RAM of the microcomputer 15 of a receiving set in advance, carries out channel selection control of the channel selection circuit according to the television channel selection input inputted from the key boat 16, and controls by the aforementioned microcomputer 15 by writing the aforementioned channel sign in the aforementioned data areas DB6 and DB7 of the teletext data of the tuned-in television channel incorporated to the aforementioned buffer memory 14 through the aforementioned input terminal 11, the waveform shaping circuit 12, and the data incorporation circuit 13. Thereby, distinction of the television channel of the teletext data memorized by the aforementioned BAFFE memory 14 is attained. Moreover, specification of a broadcasting station name is attained as compared with the program index data SID on which the aforementioned program index data SID are memorized to RAM of the aforementioned microcomputer 15 in advance, and the data areas DB6 and DB7 of the program data header in the received teletext signal and a page data header are overlapped.

[0019] Write-in operation of the aforementioned channel code data in this microcomputer 15 is explained using the flow chart of drawing 4 .

[0020] If the received program data header of a teletext signal is distinguished and reception of a program data header is checked at Step S1, it will shift to Step S3, and if reception of a program data header cannot be checked, it will shift to Step S2. At Step S2, if the received page data header of a teletext signal is distinguished and reception of a page data header is checked, it will shift to Step S3, and if a page data header cannot be checked, it will shift to Step S4. At the aforementioned step S3, the channel sign equivalent to eye channel selection my ** were inputted into the data areas DB6 and DB7 of a program data header and a page data header from the aforementioned keyboard 16 is set up with the aforementioned microcomputer 15. An end of a setup of the channel sign in this step S3 performs write-in storage processing for channel code data to the aforementioned data areas DB6 and DB7 of the teletext data memorized by the aforementioned buffer memory 14 at Step S4.

[0021] Thus, operation of the data transfer from the state which read into the aforementioned buffer memory 14 the received-character broadcast data with which the channel code data was written in, and memorized them to the aforementioned program memory 17 for presentation Is explained using the flow chart of drawing 5 .

[0022] If the character program number of the teletext data of a desired channel and this channel Is Inputted from the aforementioned keyboard 16, based on this inputted character program number, a microcomputer 15 will generate the control signal which searches the character program data of an applicable character program number from the aforementioned buffer memory 14, and will carry out reference extraction of the applicable character program data at Step S11. If existence of the program data header of this extracted character program data is checked at Step S12 and existence of a program data header is checked, it will shift to Step S14, and if existence of a program data header cannot be checked, It will shift to Step S13. At Step S13, if existence of the page data header of the aforementioned program data Is checked and existence of a page data header is checked, it will shift to Step S14, and if existence of a page data header cannot be checked, It will shift to Step S17. The aforementioned step S14 compares the selector channel inputted from the channel sign currently written in the program data header or page data header checked at the aforementioned step S12 or Step S13, and the aforementioned key boat 16. In being in agreement, it compares the program number currently written in the selection program number and the aforementioned program data header which were inputted from the aforementioned keyboard 16 at Step S15, and the page data header. The control signal for transmitting the character program data the selector channel and whose program number carried out the comparison test et the aforementioned steps S14 and S15 from the eforementioned buffer memory 14 by Step S16, and corresponded to the aforementioned program memory 17 for presentation, In being in agreement Is generated. by the basis of the control signal The aforementioned program memory 17 for presentation is made to transmit and memorize applicable character program data from the aforementioned buffer memory 14 at Step S18. The character program data which cannot check existence of a program data header and a page data header at the aforementioned step S12 and Step S13, In not being in agreement with the selector channel inputted at Steps S14 and S15, or a program number In performing the input judging of whether the character program data is already transmitted to the aforementioned program memory 17 for presentation and being under transfer at Step S17 It shifts to Step S18, and when not transmitted, the character program data of a channel inputted from the aforementioned keyboard 16 are judged to be character program data which are not memorized by the aforementioned buffer memory 14, and shift to Step S21. The data transfer of the aforementioned step S18 judges the end of transfer data using DGS (refer to data group size and drawing 2) set as the data areas DB4 and DB5 of the aforementioned program data header and a page data header In the character program data transfer end at Step S19. or reading of a different channel or the data group header of a program number -- with, you may judge it as the end of data transfer Next, It distinguishes whether at Step S20, the data retrieval of storage was completed to the buffer memory 14 by Step S21 by setting up that the character program data of the program number of a desired receiving channel ended the transfer in the aforementioned program memory 17 for presentation. When the end of transfer data is not a check in the aforementioned step and 19, it judges with transfer data remaining in buffer memory 14 at Step S21, returns to Step S11 again, and same processing is performed.

[0023] Next, the character program data storage state memorized by the aforementioned buffer memory 14 is explained using drawing 6 . This drawing shows the state where sampled the digital binary signal generated by the aforementioned waveform shaping circuit 12 for every data line through the data incorporation circuit 13, and the character program data of two or more channels were memorized by buffer memory 14. For example, the channel number 1 is inputted as a channel selection channel from a keyboard 16, and while supplying the control signal which tunes in the channel number 1 to a channel selection circuit through a microcomputer 14, the channel sign of the channel number 1 is added and memorized to the program data header and page data header of character program data of the channel number 1 which read into buffer memory 14 and are memorized. Next, the channel number 2 is tuned in, and the channel sign of the channel number 2 is attached and memorized to the character program data of the channel number 2 at the aforementioned buffer memory 14. Thus, in case it reads from buffer memory 14 to the program memory 17 for presentation by having added the channel sign into each character program data when the character program data of two or more channels were memorized by buffer memory, read-out of the character program data of a desired channel becomes possible by carrying out the specification input of e channel sign and the program number.

[0024] By this, In case character program data are conventionally read and memorized to buffer memory 14 That the character program data of a different channel which has the same character program number are memorized since the channel sign is not attached for a certain reason Although the aforementioned buffer memory 14 was initialized and only the character program data of one channel were made to always memorize at every change channel selection of a channel this invention is changed to the character program data of other already memorized channels. Though it rewrote to the character program data of a new channel, the character program data of other existing channels and the character program data of a new channel were intermingled and buffer memory 14 memorized Since the channel sign is written in the old and new character program data, in case it reads to the memory 17 for presentation, distinction of the character program data of a desired channel is attained. Therefore, a desired character program can be certainly searched with distinguishing the receiving channel code which it was only rewriting the existing character program data which do not need to initialize buffer memory 14 whenever it chooses a new channel, and are memorized by buffer memory 14 at every channel selection of a channel to new character program data one by one, and reading of became possible promptly and set the character program data of a desired channel as the program data header and the page data header.

[0025] In addition, although the channel sign was used as channel discernment written in each program data header memorized to the buffer memory 14 of this drawing 6 , and a page data header, it is also possible to use the program index data SID.

[0026] Moreover, when the storage region of buffer memory 14 becomes insufficient, it can always update to the newest character program data by rewriting the oldest character program data in the storage region of buffer memory 14.

[0027] Next, other operation forms of this Invention are explained using the block diagram of the receiving set of drawlng 7 . In addition, the same portion as drawing 1 attaches the same sign, and detailed explanation is omitted.

[0028] Drawing 7 and drawing 1 have a difference in the point of having formed the specific registration memory 21 only for registration character programs, and this registration memory 21 is memory which makes the specific character program data of a specific channel memorize.

[0029] **** of the microcomputer 15 of a receiving set of operation which has this registration memory 21 -- it explains using the flow chart of ** and drawing 8 just

[0030] About operation which sets up and memorizes a receiving channel sign at the time of alphabetic-signal reception, the flow chart of drawing 8 is Step S31, inputs the receiving channel inputted from the keyboard 16, and supplies a channel selection control signal to the channel selection circuit which Is not illustrated from a microcomputer 15 based on this inputted channel number. If separation generation is carried out in the aforementioned corrugating circuit 12 from the video signal of the television channel tuned in in the aforementioned channel selection circuit, the program data header of the alphabetic signal supplied to the aforementioned data incorporation circuit 13 is distinguished and the program data header Is recognized, it will shift to Step S33, and if a program data header is not recognized, it will shift to Step S32. At Step S32, if the received page data header of an alphabetic signal is distinguished and a page data header Is recognized, it will shift to Step S33, and if a page data header is not recognized, it will shift to Step S34. Step S33 generates the channel code data of the channel under reception based on the channel selection control signal supplied to the aforementioned channel selection circuit from the aforementioned microcomputer 15. It writes in the data areas DB6 and DB7 of the program data header recognized at Step S32 again, and a page data header. the aforementioned step S31 -- The character program data with which the channel sign was written in the aforementioned program data header and the page data header at this step S33 At Step S34, distinguish, and in being the specific program of a specific channel, whether it is the specific character program of the specific channel by which the preset was carried out The character program data is made to memorize to the aforementioned registration memory 21, and when [which Is character program data of channels other than the specific character program of the aforementioned specific channel, and a character program] it judges, it memorizes to the aforementioned buffer memory 14.

[0031] That is, carry out channel coding of the broadcast channel tuned in with the receiver to the program data header and page data header of the character program data separated from the video signal, and data writing is carried out. When the character program data which have the channel sign are the specific character program of the specific channel by which the preset was carried out By making the registration memory 21 memorize and making the character program data of the television channel except the record on the aforementioned buffer memory 14 Temporarily, in case the object channel and character program which are memorized in the registration memory 21 are changed The override Input of a channel and a character program memorized by the aforementioned microcomputer 15 from the aforementioned keyboard 16 at the registration memory 21 Is performed. The character program data incorporated from the aforementioned data incorporation circuit 13 with the aforementioned microcomputer 15 are made to change Into the changed character program of a channel, and the new character program data which attached the changed channel sign are rewritten with the oldest existing character program data. Initializing [of memory] becomes unnecessary only by rewriting the existing character program data to new character program data, without initializing, in case this changes the character program data recorded on the registration memory 21.

[0032] Next, the flow chart of drawing 9 explains operation at the time of reading and recording the character program data memorized by the aforementioned buffer memory 14 and the registration memory 21 on the aforementioned program memory 17 for a display.

[0033] At Step S41 of drawing 9 , it judges whether the character program input inputted from the aforementioned keyboard 16 is the specific character program of a specific channel. In the case of the specific character program of a specific channel The character program data which correspond from the aforementioned registration memory 21 are read. In the case of the other character program of other channels The applicable character program data memorized by the aforementioned BAFFE memory 14 are read. If a program data header's existence judging is performed at Step S42 and a program data header is checked based on the read character program data, it will shift to Step S44, and if a program data header is not checked, it will shift to Step S43. At Step S43, if a page data header's existence judging is performed from character program data and existence of a page data header is checked, it will shift to Step S44, and if existence of a page data header is not checked, it will shift to Step S47. The channel code data currently written in the data areas DB6 and DB7 of the program data header checked at the aforementioned steps S42 and S43 or a page data header at the aforementioned step S44 If it judges and channel code data is in agreement as a result of the judgment, whether it is in agreement with the channel number inputted from the aforementioned keyboard 16 If it judges at Step S45 as compared with the program number Inputted from the program number and the aforementioned keyboard 16 of character program data of the channel and the program number Is In agreement It sets up so that the transfer start of the aforementioned channel number, a program number, or the character program data in agreement may be carried out at Step S46 at the aforementioned program memory 17 for a display. When a program number is not in agreement at the channel number data currently written in the aforementioned data areas DB6 and DB7 at the aforementioned step S44, and Step S45, it shifts to Step 47. As for this step S47, a program data header or a page data header exists at the aforementioned steps S42-S45. And when the character program data which are in agreement with an input channel number and a character program number do not exist If it judges and is already under transfer, when it shifts to Step S48 and is not carried out during the transfer, whether it is already transmitting to the program memory 17 for a display The character program data of a channel inputted from the aforementioned keyboard 16 are judged to be character program data which are not memorized by the aforementioned BAFFE memory 14 and the registration memory 21, and shift to Step S51. In the aforementioned step S48, transfer processing of the applicable character program data Is carried out by the basis of transfer control of the aforementioned steps S46 and S47 at the presentation program memory 17, and an applicable character program data transfer end is checked at Step S49. Judgment of the data transfer of the program of a request of this step S49 may look at and judge DGS (data group size) set as the data areas DB4 and DB5 of a program data header or a page data header, or may judge reading of a different channel and the data group header of a program number to be a ****** end. A transfer end setup is performed for the data of the character program number of a desired receiving channel in the program memory 17 for presentation at Step S50. next, at Step S51 It distinguishes whether all reference of the channel inputted from the aforementioned keyboard 16 and the data applicable to a character program number was completed from the alphabetic data used as buffer memory 14 and the registration memory 21 account 100 million. When reference Is not completed, it returns to Step S41 and reference is repeated again, and In the reference end of all data, processing is ended.

[0034] That is, by adding the channel code data which shows the transmission channel to a program data header and a page data header, and already rewriting with the oldest character program data of storage, in case the character program data transmitted to the aforementioned BAFFE memory 14 or the registration memory 21 are memorized The reference of the character program of a channel which asks for the reproduction display inputted from the keyboard 16 is attained, and even if the character program data newly remembered to be the existing character program data even if are intermingled, a judgment whether it is the character program of a desired channel can also be made easily. Moreover, in case the specific program of the specific channel registered into the aforementioned registration memory 21 is changed, initializing [of the aforementioned registration memory 21] becomes unnecessary only by changing the channel code data and the program number of the character program data incorporated in the aforementioned registration memory 21 from the aforementioned data incorporation circuit 13 by the basis of control of the aforementioned microcomputer 15.

[0035]

[Effect of the Invention] The teletext receiving set of this invention can omit initialization operation of buffer memory which was being performed for every channel change, and even if it intermingles for it and memorizes the teletext program of two or more channels, the reference of a desired character program of it is attained, and in case the character program of a specific channel is memorized in different registration memory from the aforementioned buffer memory on the other hand and a specific character program is changed, an omissible teletext receiving set can be realized in initialization operation of registration memory.

[0036] Furthermore, when memory initialization operation already chooses the channel of storage by having become omissible, it becomes possible to show a request character program without the latency time.

[Translation done.]

* NOTICES *

Japan Patent Office is not responsible for any
damages caused by the use of this translation.

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] The block diagram showing the circuitry of 1 operation gestalt of the teletext receiving set concerning this invention.

[Drawing 2] The data block diagram showing the data composition of the data header of a teletext signal which carries out reception reproduction with the teletext receiving set of this invention.

[Drawing 3] The data block diagram showing the code configuration of the channel sign which carries out an addition setup in the data header of the teletext signal which carries out reception reproduction with the teletext receiving set of this invention.

[Drawing 4] The flow chart for the teletext receiving set of 1 operation gestalt of this invention explaining addition setting operation for a channel sign.

[Drawing 5] The flow chart for carrying out an addition setup of the channel sign with the teletext receiving set of 1 operation gestalt of this invention, and explaining reference processing operation for character program data.

[Drawing 6] The stored data block diagram showing the composition of the teletext data memorized to the buffer memory used for the teletext receiving set of 1 operation gestalt of this invention.

[Drawing 7] The block diagram showing the circuitry of other operation gestalten of the teletext receiving set which this invention requires.

[Drawing 8] The flow chart for the teletext receiving set of other operation gestalten of this invention explaining addition setting operation for a channel sign.

[Drawing 9] The flow chart for carrying out an addition setup of the channel sign with the teletext receiving set of other operation gestalten of this invention, and explaining reference processing operation for character program data.

[Description of Notations]

11 [-- A data incorporation circuit 14 / -- Buffer memory, 15 / -- A microcomputer, 16 / -- A keyboard, 17 / -- The program memory for presentation, 18 / -- A display-control circuit, 19 / -- An image memory, 20 / -- Output terminal.] -- An input terminal, 12 -- A waveform shaping circuit, 13

[Translation done.]

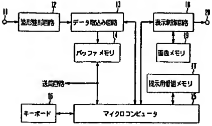
* NOTICES *

Japan Patent Office is not responsible for any
damages caused by the use of this translation.

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

DRAWINGS

[Drawing 1]


11
12
波形整形回路
13
データ取込み回路
14
バッファメモリ
送信回路
16
キーボード
マイクロコンピュータ
18
表示制御回路
20
19
画像メモリ
17
提示用番組メモリ
15

[Drawing 2]

（a）番組データヘッダの構成

b8 b7 b6 b5 b4 b3 b2 b1

DB1	ヘディング開始符号
DB2	データグループ識別符号 ： データグループ再送符号
DB3	DGL ： DGC
DB4	DGS（下位）
DB5	DGS（上位）
DB6	運用データ
DB7	運用データ
DB8	情報分離符号
DB9	データヘッダパラメタ
DB10	データヘッダデータ長
DB11	マガジン番号 ： 番組番号1
DB12	番組番号2 ： 番組番号3
DB13	ページ総数
DB14	視聴レベル ： 番組形態
DB15	番組提示デバイス
DB16	ページ進行
DB17	番組内容更新フラグ
DB18	番組データ長
DB19	番組データ長

用語の説明
DGL：データグループリンク符号
DGC：データグループ連結番号
DGS：データグループサイズ

（b）ページデータヘッダの構成

b8 b7 b6 b5 b4 b3 b2 b1

DB1	ヘディング開始符号
DB2	データグループ識別符号 ： データグループ再送符号
DB3	DGL ： DGC
DB4	DGS（下位）
DB5	DGS（上位）
DB6	運用データ
DB7	運用データ
DB8	情報分離符号
DB9	データヘッダパラメタ
DB10	データヘッダデータ長
DB11	マガジン番号 ： 番組番号1
DB12	番組番号2 ： 番組番号3
DB13	ページ番号1 ： ページ番号2
DB14	視聴レベル ： 番組形態
DB15	ページ提示デバイス
DB16	表示モード制御
DB17	提示更新制御
DB18	初期提示制御
DB19	ヘッダラスタ色 ： ラスタ色

[Drawing 3]

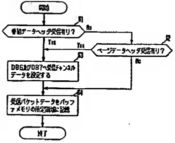
（a）

受信チャンネル	チャンネル符号（hex）	
	DB6	DB7
01	01	00
02	02	00
03	03	00
04	04	00
05	05	00
·	·	
·	·	
·	·	
62	3E	00
CATV13	3F	00
CATV14	40	00
·	·	
·	·	

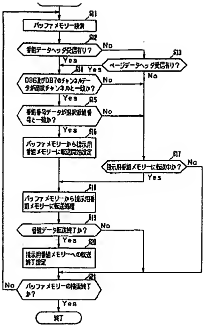
（b）

チャンネル符号	
DB6	番組索引データSID　都道府県コード
DB7	番組索引データSID　放送局コード

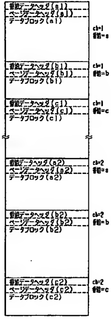
[Drawing 4]


開始
S1
番組データヘッダ受信有り？
No
Yes
S2
Yes
ページデータヘッダ受信有り？
No
S3
DB6及びDB7へ受信チャンネルデータを設定する
S4
受信パケットデータをバッファメモリの所定領域に記憶
終了

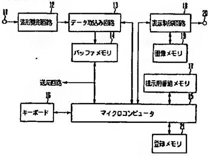
[Drawing 5]


S11
バッファメモリー検索
S12
番組データヘッダ受信有り？
No
Yes
S13
ページデータヘッダ受信有り？
Yes
No
S14
DB6及びDB7のチャンネルデータが選択チャンネルと一致か？
No
Yes
S15
番組番号データが選択番組番号と一致か？
No
Yes
S16
バッファメモリーから提示用番組メモリーに転送開始設定
S17
提示用番組メモリーに転送中か？
No
Yes
S18
バッファメモリーから提示用番組メモリーに転送処理
S19
番組データ転送終了か？
No
Yes
S20
提示用番組メモリーへの転送終了設定
S21
No
バッファメモリーの検索終了か？
Yes
終了

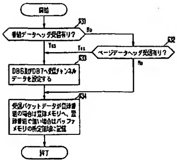
[Drawing 6]


番組データヘッダ（a1）
ページデータヘッダ（a1）
データブロック（a1）
ch=1
番組=a
番組データヘッダ（b1）
ページデータヘッダ（b1）
データブロック（b1）
ch=1
番組=b
番組データヘッダ（c1）
ページデータヘッダ（c1）
データブロック（c1）
ch=1
番組=c
番組データヘッダ（a2）
ページデータヘッダ（a2）
データブロック（a2）
ch=2
番組=a
番組データヘッダ（b2）
ページデータヘッダ（b2）
データブロック（b2）
ch=2
番組=b
番組データヘッダ（c2）
ページデータヘッダ（c2）
データブロック（c2）
ch=2
番組=c

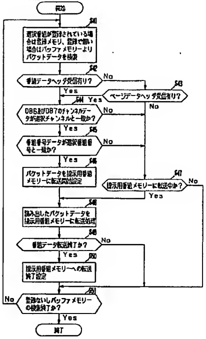
[Drawing 7]


11
12
波形整形回路
13
データ取込み回路
14
バッファメモリ
18
表示制御回路
20
19
画像メモリ
17
提示用番組メモリ
送局回路
16
キーボード
15
マイクロコンピュータ
21
登録メモリ

[Drawing 8]


開始
S31
番組データヘッダ受信有り?
No
Yes
S32
Yes
ページデータヘッダ受信有り?
No
S33
DB6及びDB7へ受信チャンネルデータを設定する
S34
受信パケットデータが登録番組の場合は登録メモリへ、登録番組で無い場合はバッファメモリの所定領域に記憶
終了

[Drawing 9]


開始
S41
選択番組が登録されている場合は登録メモリ、登録で無い場合はバッファメモリーよりパケットデータを検索
S42
番組データヘッダ受信有り?
No
S43
Yes
ページデータヘッダ受信有り?
S44
Yes
No
DB6及びDB7のチャンネルデータが選択チャンネルと一致か?
No
Yes
S45
番組番号データが選択番組番号と一致か?
No
Yes
S46
パケットデータを提示用番組メモリーに転送開始設定
S47
提示用番組メモリーに転送中か?
No
Yes
S48
読み出したパケットデータを提示用番組メモリーに転送処理
S49
番組データ転送終了か?
No
Yes
S50
提示用番組メモリーへの転送終了設定
S51
No
登録ないしバッファメモリーの検索終了か?
Yes
終了

[Translation done.]

This Page is Inserted by IFW Indexing and Scanning Operations and is not part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☑ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** ______________________

IMAGES ARE BEST AVAILABLE COPY.
As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.